



# CDF Operations Report

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Bastille Day, 2003

All Experimenters' Meeting



# Stores summary

| Date    | Store | Inst Lum<br>(initial) | Int Lum<br>(delivered) | Lum to tape ( $\epsilon$ )   | Physics Lum ( $\epsilon$ )   |
|---------|-------|-----------------------|------------------------|------------------------------|------------------------------|
| Mo 7/7  | 2768  | 32.6e30               | 954.4                  | 702.3 (73.6%)                | 702.3 (73.6%)                |
| Tu 7/8  | 2770  | 33.9e30               | 1438.0                 | 1259.7 (87.6%)               | 1259.7 (87.6%)               |
| We 7/9  | 2772  | 35.2e30               | 1482.2                 | 1321.1 (89.1%)               | 1301.9 (87.8%)               |
| Th 7/10 | 2774  | 37.4e30               | 1621.8                 | 1197.7 (73.9%)               | 1139.1 (70.2%)               |
| Fr 7/11 | 2780  | 40.0e30               | 1574.7                 | 1396.0 (88.7%)               | 1379.1 (87.6%)               |
| Su 7/13 | 2783  | 33.3e30               | 1396.0                 | 1247.5 (89.4%)               | 1247.5 (89.4%)               |
| Total   |       |                       | 8.5 pb <sup>-1</sup>   | 7.1 pb <sup>-1</sup> (84.1%) | 7.0 pb <sup>-1</sup> (83.0%) |



# Inefficiency sources

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- Online server crash at beginning of store 2774
  - Adding a new node to online cluster triggered an IRIX bug
  - Upgrade OS during shutdown
- Old code cleanup
  - Discovered EVB had pointer to old code hardwired in --- removed
- Quench warning, store 2774
  - Ramped down, began setting up for a test that didn't require much HV
  - Got the “all clear” ~1 hr later --- back out of test, ramp up HV
- TDC hang-up
  - Tried several TDC reseats, eventually had to swap one out
- “End-of-store studies”



# Tests

- Silicon noise studies

- Trying to assess the useful lifetime of SVX
- Manually decreased S/N to simulate life after several  $\text{fb}^{-1}$  of radiation damage

- Higher occupancy  $\rightarrow$  SVT processing about  $5 \mu\text{s}$  longer  $\rightarrow$  not bad
- Analysis of b-tagging performance underway

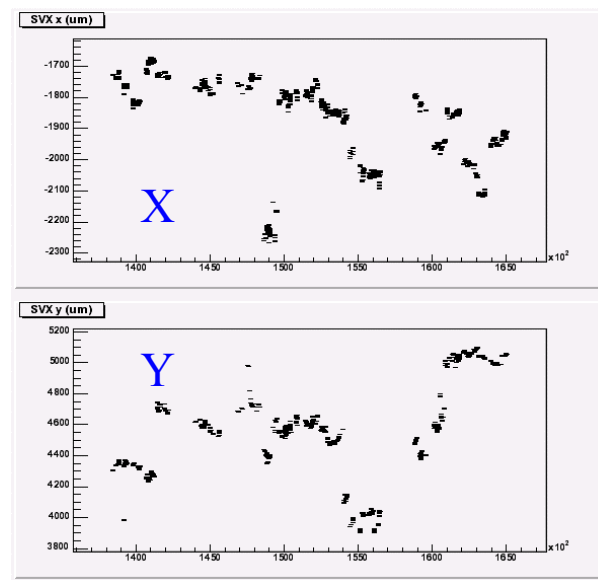
- Track trigger test

New roads to compensate for beam drift

$\sim 0.4 \text{ mm}$



$\sim 1.4 \text{ mm}$





# Conclusions

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- 7.0 out of 8.5  $\text{pb}^{-1}$  collected this week for physics (83% efficiency)
  - Disappointed in the 83%
  - Pleased with the 7  $\text{pb}^{-1}$
- No major detector problems, no access requests
  - Piggybacked off 3 short accesses to fix silicon ladders, forward muon scintillator power supply
- Stack and store away